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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/004,289 | 10/25/2001 | Steven I. Ross | 1280.2003-000 | 8162 |
| 21005 | 7590 | 06/05/2006 | EXAMINER | |
| HAMILTON, BROOK, SMITH & REYNOLDS, P.C. | | | EDOUARD, PATRICK NESTOR | |
| 530 VIRGINIA ROAD | | | ART UNIT | |
| P.O. BOX 9133 | | | PAPER NUMBER | |
| CONCORD, MA 01742-9133 | | | 2626 | |

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,289

Applicant(s)

ROSS ET AL.

Examiner

Patrick N. Edouard

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/16/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05/02/2006, 03/16/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to communication filed 03/16/2006. Claims 1-22 are pending

Response to Arguments

2. Applicant's arguments with respect to claims 1- 22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 7-12, 14-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loatman et al (US Patent 4,914,950) in view of Wang et al (6,505,162)

Regarding claims 1, 8, 15 and 22-23, Loatman et al. disclose a method, system and computer-readable medium for analyzing spoken utterances comprising common language words in a speech-enabled environment comprising the steps of

Generating a grammatic specification suitable for processing spoken utterances based on a domain model for a speech-enabled application (speech recognition device,

Col. 6, Lines 16-18, deriving an ATN grammar specification and submitting the resultant 'case frames' to discourse analysis to derive domain-specific knowledge, Col. 2, Line 65 - Col. 3, Line 3, see Fig. 1, elements 80, 90, 110, 120, 130 and 135),

processing a recognition message, based on one of the spoken utterances recognized by a speech engine, to produce an initial semantic representation of the recognized spoken utterance based on the grammatic specification and the domain model (converting the syntactic structure to case frames' which are semantic structures, Col. 2, Line 65-Col. 3, Line 3); and

providing a set of propositions that represent the recognized spoken utterance, the set of propositions based on the initial semantic representation and the domain model (passing the conceptual structures to a knowledge system, Col. 6, Lines 44-69, see Fig. 1, elements 140, 160 and 165).

It is noted that Loatman et al teach the claimed invention but do not explicitly teach: generating a grammatic specification based on a syntax template for the domain model. However, this feature is well known in the art as evidenced by Wand et al who in figures 6-8(b) at col. 6, lines 3461, the kernel of the dialogue manager serves as a dialogue control unit that matches the system states with the dialogue states within the hierarchical task description table wherein the hierarchical task description table including a plurality of bases tables defining the strategy of a sub-dialogue. Therefore, one having ordinary skill in the art at the time the invention was made would have it obvious to incorporate into Loatman's system the dialogue manager and the hierarchical task description table as taught by Wang et al because it would provide a system where the control mechanism can be standardized.

Regarding claims 2, 4, 9, 11, 16 and 18, Loatman et al further disclose the step

receiving an ontological description of the domain model based on entities, classes, and attributes (discourse analysis component for generating patterns based on the specific domain, Col. 3, Lines 35-43, Role Specification, Section 5.1; entities that may fill the case roles, Col. 1, Lines 45-50, Person or Agent class, and attributes or properties, Col. 16, Lines 30-51 ', case frames represent a proposition about the world (thus ontological description), Col. 3, Lines 12-24)

receiving syntax templates for the domain model specifying legal word sequences based on the ontological description (syntactic parsing and applying domain- specific templates, Col. 6, Lines 52-62- see also Wang hierarchical task description table 605 and external databases); and

combining the ontological description, a lexicon, and the syntax templates to generate the grammatic specification (deriving a conceptual structure from lexical, syntactic, semantic and domain-specific information, Col. 2, Line 61 - Col. 3, Line 3, Col. 3, Lines 12-24 and 35-43).

As per claims 3, 10 and 17, Loatman et al teach the domain model comprises a lexicon of words associated with the speech-enabled application, said lexicon providing synonyms and pads of speech information for elements of the ontological description, and wherein the grammatic specification is based on said lexicon (separating lexical categories, Col. 40, Lines 17-21 and synonyms, Col. 47, Lines 45-55 (see Lexicon, Section 4)), concept association and case frame template specifications Col. 58 Lines 24-32, examining a series of words in reference to a lexicon as part of the conceptual structure generation process, Col. 2, Lines 61-64, application-specific vocabulary, Col. 2, Lines 18-21).

Regarding claims 5, 12 and 19, Loatman et al. disclose the domain model comprises a syntax specification and the grammatic specification is based on the syntax specification

(grammar specification based syntactic parsing results in case frames, Col. 2, Lines 65, pattern matching based on domain-specific knowledge, Col. 3, Lines 35-43).

Regarding claims 7, 14 and 21, Loatman et al. further disclose the initial semantic representation is based on a frame structure representing the recognized spoken utterance (stream of text produced by a speech recognition device and semantic structures known as 'case frames', Col. 6, Lines 14-18 and 41-43).

5. Claims 6, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loatman et al. (US Patent 4,914,590) in view of Wang et al (6,505,162) as applied to claims 1, 12 and 19 above and further in view of Phillips et al. (US Patent 6,519,562).

Regarding claims 6, 13 and 20, the combination of Loatman et al with Wang teaches the claimed but does not explicitly teach wherein the grammatic specification is Backus Naur Form grammar. However, this feature is well known in the art as evidenced by Phillips et al who teach the grammatic specification is a Backus Naur Form grammar at col. 6, Lines 22-32). Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to modify the teachings of the combination of Loatman with Wang by having the grammatic specification be a Backus Naur Form grammar, as taught by Phillips et al, since it's an effective method of analyzing and describing the linguistic properties of a word string.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick N. Edouard whose telephone number is 7033086725. The examiner can normally be reached on M-TH 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571 272 7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PNE

ME
Primary Examiner